Website:http://biz.LGservice.com
E-mail:http://www.LGEservice.com/techsup.html

COLOR MONITOR
SERVICE MANUAL

CHASSIS NO. : CL-63

MODEL: FLATRON L2010P(L2010PM-AL**Q)

( ) **Same model for Service

CAUTION

BEFORE SERVICING THE UNIT,
READ THE **SAFETY PRECAUTIONS** IN THIS MANUAL.

CONTENTS

SPECIFICATIONS 2
PRECAUTIONS 4
TIMING CHART 5
OPERATING INSTRUCTIONS 6
WIRING DIAGRAM 9
BLOCK DIAGRAM 10
DESCRIPTION OF BLOCK DIAGRAM.....11
ADJUSTMENT 13
TROUBLESHOOTING GUIDE 14
EXPLODED VIEW.....21
REPLACEMENT PARTS LIST 23
SCHEMATIC DIAGRAM..... 35

SPECIFICATIONS

1. LCD CHARACTERISTICS

Type	: TFT Color LCD Module
Size	: 20.1inch
Pixel Pitch	: 0.255(H) x 0.255(V)
Color Depth	: 8-bit, 16,777,216 colors
Electrical Interface	: LVDS
Surface Treatment	: Anti-Glare, Hard Coating(3H)
Operating Mode	: Normally Black
Backlight Unit	: Six-CCFL (Cold Cathode Fluorescent Lamp)

2. OPTICAL CHARACTERISTICS

2-1. Viewing Angle by Contrast Ratio ≥ 10

Left : -85° min., -88°(Typ)
Right : +85° min., +88°(Typ)
Top : +85° min., +88°(Typ)
Bottom : -85° min., -88°(Typ)

2-2. Luminance : 200(min), 250(Typ) **-6500K**
: more than 110cd/m2 **-9300K**

2-3. Contrast Ratio : 400(Typ)

3. SIGNAL (Refer to the Timing Chart)

3-1. Sync Signal

• Type : Separate, Positive/Negative
Composite, SOG (Sync On Green)
Digital

3-2. Video Input Signal

1) Type	: R, G, B Analog
2) Voltage Level	: 0~0.71 V
a) Color 0, 0	: 0 Vp-p
b) Color 7, 0	: 0.467 Vp-p
c) Color 15, 0	: 0.714 Vp-p
3) Input Impedance	: 75 Ω

3-3. Operating Frequency

Horizontal	: 28 ~ 92kHz **(Analog)**
	: 28 ~ 80kHz **(Digital)**
Vertical	: 56 ~ 85Hz

4. MAX. RESOLUTION

Analog	: 1600 x 1200 @60Hz
Digital	: 1600 x 1200 @60Hz
	1280 x 1024 @70Hz

5. POWER SUPPLY

5-1. Power Adaptor(Built-in Power)
Input : AC 100-240V~, 50/60Hz , 1.2A

5-2. Power Consumption

MODE	H/V SYNC	VIDEO	POWER CONSUMPTION	LED COLOR
POWER ON (NORMAL)	ON/ON	ACTIVE	less than 60 W	GREEN
STAND-BY	OFF/ON	OFF	less than 3 W	AMBER
SUSPEND MODE	ON/OFF	OFF	less than 3 W	AMBER
DPM OFF	OFF/OFF	OFF	less than 3 W	AMBER
POWER KEY OFF	-	-	less than 3 W	OFF
CUTOFF SWITCH OFF	-	-	less than 1 W	OFF

6. ENVIRONMENT

6-1. Operating Temperature: 10°C~35°C (50°F~95°F)
6-2. Relative Humidity : 10%~80%
(Non-condensing)
6-3. MTBF : 40,000 Hour(Min)

7. DIMENSIONS (with TILT/SWIVEL)

Width	: 446.0 mm (17.56")
Depth	: 237.3 mm (9.34")
Height	: 445.6 mm (17.54")

8. WEIGHT (with TILT/SWIVEL)

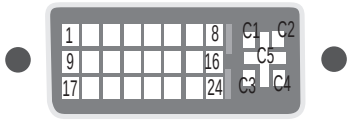
Net. Weight	: 9.5kg (20.95 lbs)
Gross Weight	: 12.0kg (26.46 lbs)

9. USB

Upstream : 1 port, Downstream : 2 port
Speed : Full-12Mbps, Low-1.5Mbps

Signal Connector Pin Assignment

• DVI-I Connector (Digital/Analog)



Pin	Signal (DVI-I)	Pin	Signal (DVI-I)
1	T. M. D. S. Data2-	16	Hot Plug Detect
2	T. M. D. S. Data2+	17	T. M. D. S. Data0-
3	T. M. D. S. Data2/4 Shield	18	T. M. D. S. Data0+
4	T. M. D. S. Data4-	19	T. M. D. S. Data0/5 Shield
5	T. M. D. S. Data4+	20	T. M. D. S. Data5-
6	DDC Clock	21	T. M. D. S. Data5+
7	DDC Data	22	T. M. D. S. Clock Shield
8	Analog Vertical Sync.	23	T. M. D. S. Clock+
9	T. M. D. S. Data1-	24	T. M. D. S. Clock-
10	T. M. D. S. Data1+	C1	Analog Red
11	T. M. D. S. Data1/3 Shield	C2	Analog Green
12	T. M. D. S. Data3-	C3	Analog Blue
13	T. M. D. S. Data3+	C4	Analog H. Sync.
14	+5V Power	C5	Analog Ground
15	Ground (return for +5V, H. Sync. and V. Sync.)		

T. M. D. S. (Transition Minimized Differential Signaling)

PRECAUTION

WARNING FOR THE SAFETY-RELATED COMPONENT.

- There are some special components used in LCD monitor that are important for safety. ***These parts are marked ⚠on the schematic diagram and the replacement parts list.*** It is essential that these critical parts should be replaced with the manufacturer's specified parts to prevent electric shock, fire or other hazard.
- Do not modify original design without obtaining written permission from manufacturer or you will void the original parts and labor guarantee.

TAKE CARE DURING HANDLING THE LCD MODULE WITH BACKLIGHT UNIT.

- Must mount the module using mounting holes arranged in four corners.
- Do not press on the panel, edge of the frame strongly or electric shock as this will result in damage to the screen.
- Do not scratch or press on the panel with any sharp objects, such as pencil or pen as this may result in damage to the panel.
- Protect the module from the ESD as it may damage the electronic circuit (C-MOS).
- Make certain that treatment person's body are grounded through wrist band.
- Do not leave the module in high temperature and in areas of high humidity for a long time.
- The module not be exposed to the direct sunlight.
- Avoid contact with water as it may a short circuit within the module.
- If the surface of panel become dirty, please wipe it off with a softmaterial. (Cleaning with a dirty or rough cloth may damage the panel.)

⚠ CAUTION

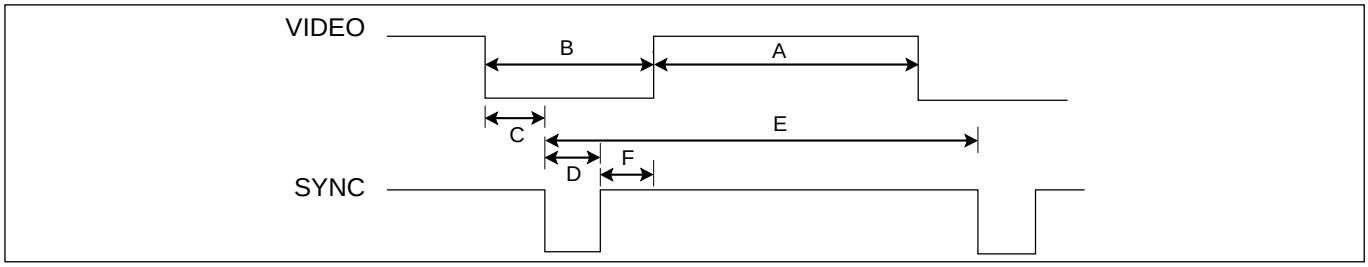
Please use only a plastic screwdriver to protect yourself from shock hazard during service operation.

⚠ WARNING

BE CAREFUL ELECTRIC SHOCK !

- If you want to replace with the new backlight (CCFL) or inverter circuit, must disconnect the AC adapter because high voltage appears at inverter circuit about 650Vrms.
- Handle with care wires or connectors of the inverter circuit. If the wires are pressed cause short and may burn or take fire.

TIMING CHART

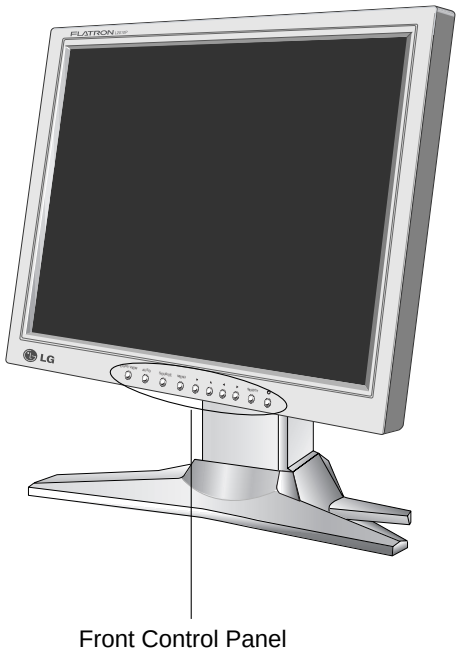


<< Dot Clock **(MHz),** Horizontal Frequency **(kHz)**, Vertical Frequency **(Hz)**, Horizontal etc... **(µs)**, Vertical etc... **(ms) >>**

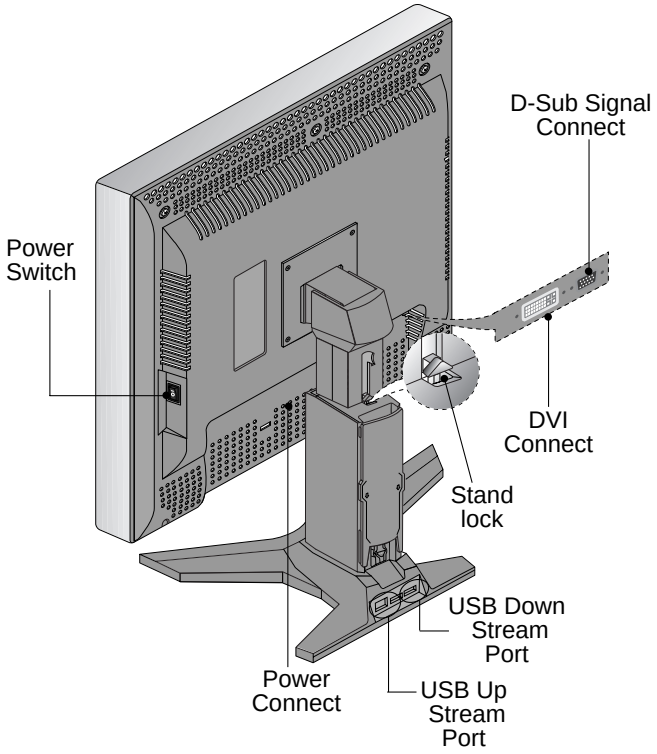
Mode	H/V Sort	Sync Polarity	Dot Clock	Frequency	Total Period (E)	Video Active Time (A)	Front Porch (C)	Sync Duration (D)	Back Porch (F)	Resolution
1	H	+	25.175	31.47	800	640	16	96	48	**640x350**
	V	–		70.09	449	350	38	2	60	**70Hz**
2	H	–	25.175	31.47	800	640	16	96	48	**640x480**
	V	–		59.94	525	480	10	2	33	**60Hz**
3	H	–	31.5	37.5	840	640	16	64	120	**640x480**
	V	–		75	500	480	1	3	16	**75Hz**
4	H	–	36.0	43.27	832	640	56	56	80	**640x480**
	V	–		85.01	509	480	1	3	25	**85Hz**
5	H	–	28.324	31.47	900	720	18	108	54	**720x400**
	V	+		70.08	449	400	13	2	34	**70Hz**
6	H	+	40.0	37.88	1056	800	40	128	88	**800x600**
	V	+		60.32	628	600	1	4	23	**60Hz**
7	H	+	49.5	46.88	1056	800	16	80	160	**800x600**
	V	+		75.0	625	600	1	3	21	**75Hz**
8	H	+	56.25	53.67	1048	800	32	64	152	**800x600**
	V	+		85.06	631	600	1	3	27	**85Hz**
9	H	–	57.283	49.72	1152	832	32	64	224	**832x624**
	V	–		74.55	667	624	1	3	39	**75Hz**
10	H	–	65.0	48.36	1344	1024	24	136	160	**1024x768**
	V	–		60.0	806	768	3	6	29	**60Hz**
11	H	+	78.75	60.02	1312	1024	16	96	176	**1024x768**
	V	+		75.03	800	768	1	3	28	**75Hz**
12	H	+	94.5	68.68	1376	1024	48	96	208	**1024x768**
	V	+		85.0	808	768	1	3	36	**85Hz**
13	H	–	100.0	68.68	1456	1152	32	128	144	**1152x870**
	V	–		75.06	915	870	3	3	39	**75Hz**
14	H	+/–	92.978	61.80	1504	1152	18	134	200	**1152x900**
	V	+/–		65.96	937	900	2	4	31	**65Hz**
15	H	+	108.0	63.98	1688	1280	48	112	248	**1280x1024**
	V	+		60.02	1066	1024	1	3	38	**60Hz**
16	H	+	135.0	79.98	1688	1280	16	144	248	**1280x1024**
	V	+		75.02	1066	1024	1	3	38	**75Hz**
17	H	+	112.27	62.11	1808	1600	90	30	88	**1600x1024**
	V	+		60.00	1040	1024	10	3	3	**60Hz**
18	H	+	162 (Analog only)	75.0	2160	1600	64	192	304	**1600x1200**
	V	+		60.00	1250	1200	1	3	46	**60Hz**
19	H	+	130.89 (Digital only)	73.53	1780	1600	20	80	80	**1600x1200**
	V	+		60	1225	1200	1	3	21	**60Hz**

OPERATING INSTRUCTIONS

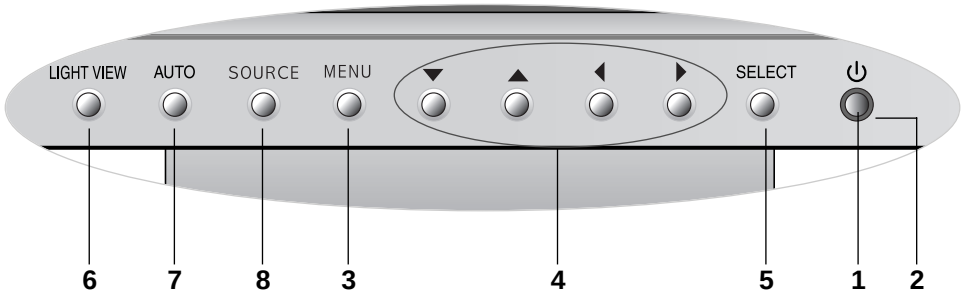
FRONT VIEW



REAR VIEW



Front Control Panel

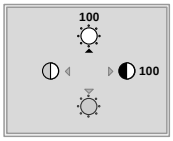


1. Power ON/OFF Button
Use this button to turn the monitor on or off.

2. Power Indicator
This indicator lights up green when the monitor operates normally. If the display is in DPM(Energy Saving)mode, this indicator color change to amber.

3. MENU Button
Use these button to enter or exit the On Screen Display.

4. ▼▲◄► Buttons
Use these button to choose or adjust items in the On Screen Display.



Bring up contrast and brightness adjustment.

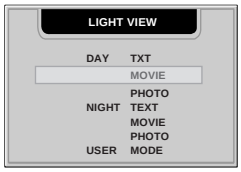
Direct Access Function

5. SELECT Button

Use this buttons to enter a selection in the On Screen Display.

6. LIGHT VIEW Button

This function optimizes the brightness, contrast of color value to the surrounding conditions and settings and enables you to enjoy the most suitable picture by adjusting the



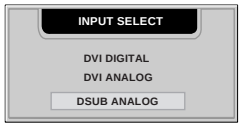
surroundings(DAY/LIGHT/USER MODE).

- TEXT: For viewing letters
- MOVIE: For viewing movies
- PHOTO: For viewing pictures or the photographs
- USER MODE: This function memorizes the manual adjustment-Brightness, Contrast color value on the On Screen Display

7. AUTO Adjustment Button

When adjusting your display settings, always press the AUTO button before entering On Screen Display(OSD). This will automatically adjust your display image to the ideal settings for the current screen resolution size(display mode).
The best display mode is **1600 x 1200@60Hz**.

8. SOURCE Selections:SOURCE → ▼▲ → SELECT



Use this button to make DVI digital, DVI analog or D-sub analog connector active.
This feature is used when two computers are connected to the display. The default setting is D-sub.

- DVI DIGITAL
- DVI ANALOG
- D-SUB ANALOG

.CONTROLS LOCKED /UNLOCKED: MENU & ► Button

This function allows you to secure the current control settings, so that they cannot be inadvertently changed.
Press and hold the MENU button and ► button for 3 seconds: the message **"CONTROLS LOCKED"** appears.

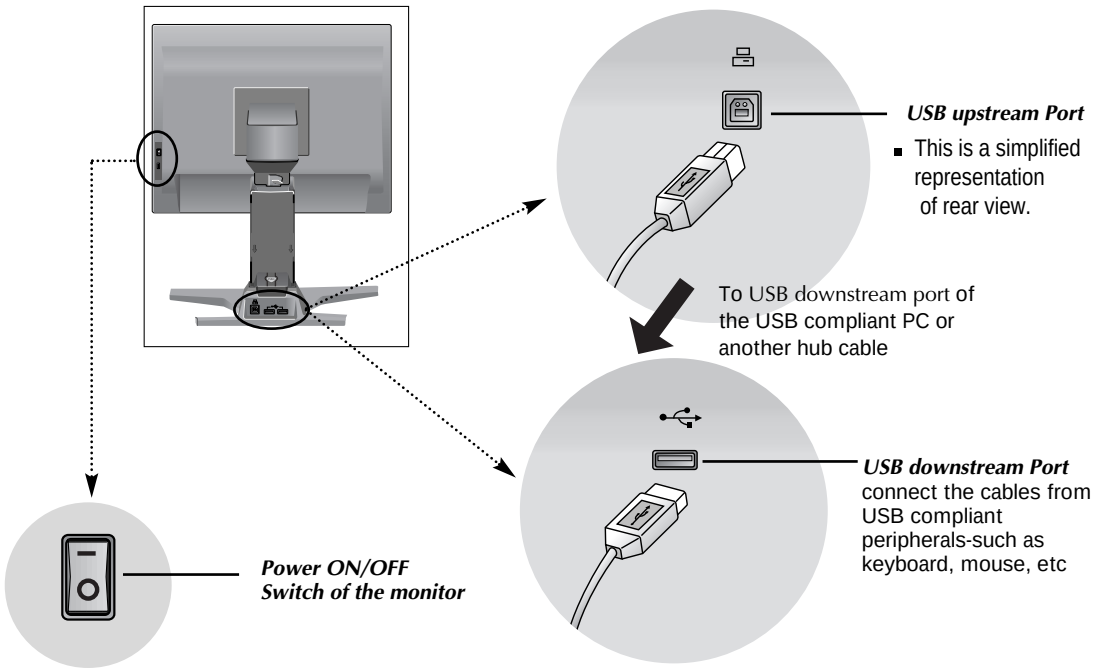
You can unlock the OSD controls at any time by pushing the MENU button and ► button for 3 seconds:
the message **"CONTROLS UNLOCKED"** will appear.

Making use of USB (Universal Serial Bus)*

USB (Universal Serial Bus) is an innovation in connecting your different desktop peripherals conveniently to your computer. By using the USB, you will be able to connect your mouse, keyboard, and other peripherals to your display instead of having to connect them to your computer. This will give you greater flexibility in setting up your system. USB allows you to connect a chain of up to 120 devices on a single USB port; and you can “hot” plug (attach them while the computer is running) or unplug them while maintaining the Plug and the Plug auto detection and configuration. This display has an integrated BUS-powered USB hub, allowing up to 2 other USB devices to be attached it.

USB connection

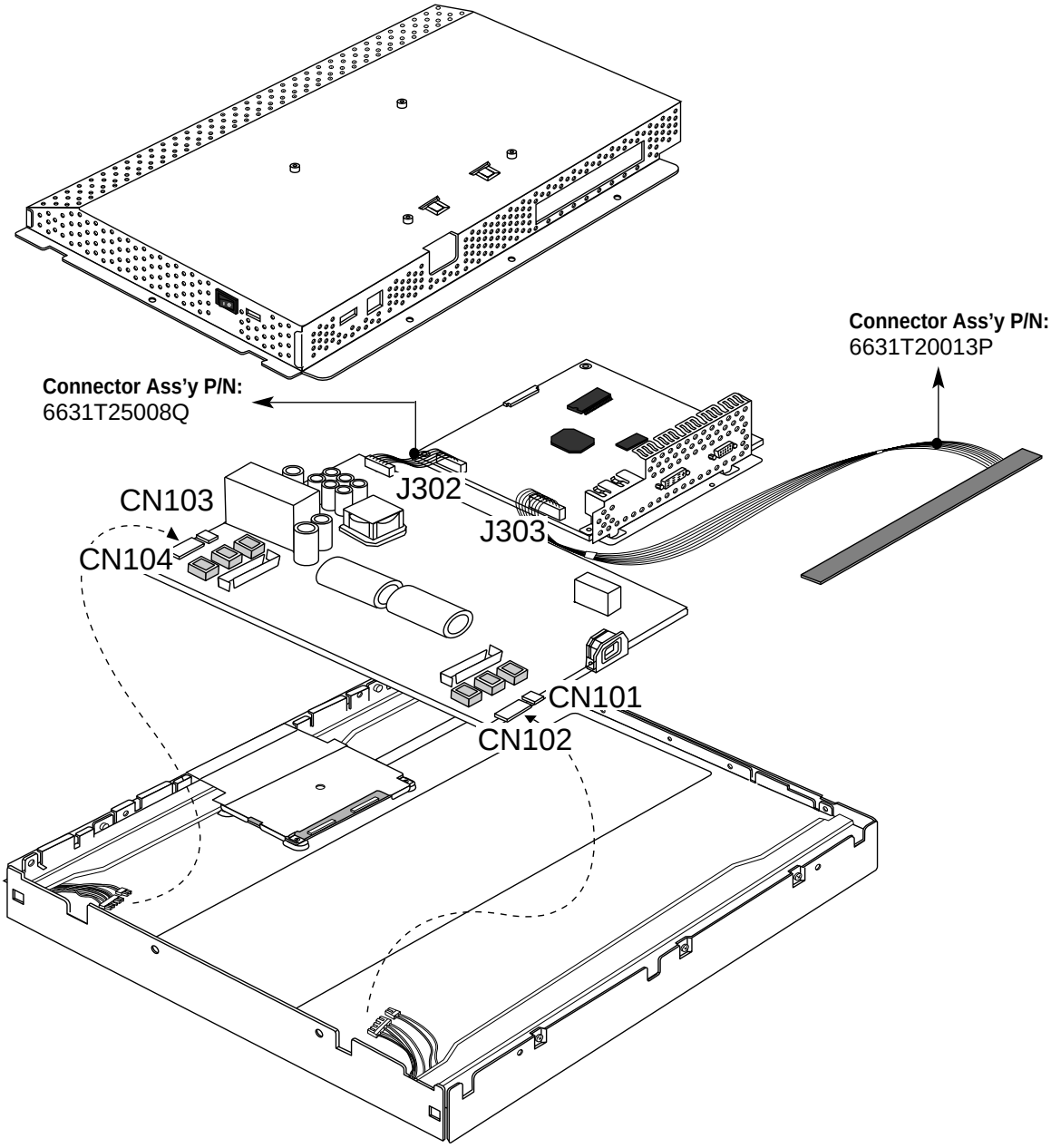
1. Connect the upstream port of the display to the downstream port of the USB compliant PC or another hub using the USB cable. (Computer must have a USB port)
2. Connect the USB compliant peripherals to the downstream ports of the display.


USB upstream Port
This is a simplified representation of rear view.
To USB downstream port of the USB compliant PC or another hub cable
USB downstream Port
connect the cables from USB compliant peripherals-such as keyboard, mouse, etc
Power ON/OFF
Switch of the monitor

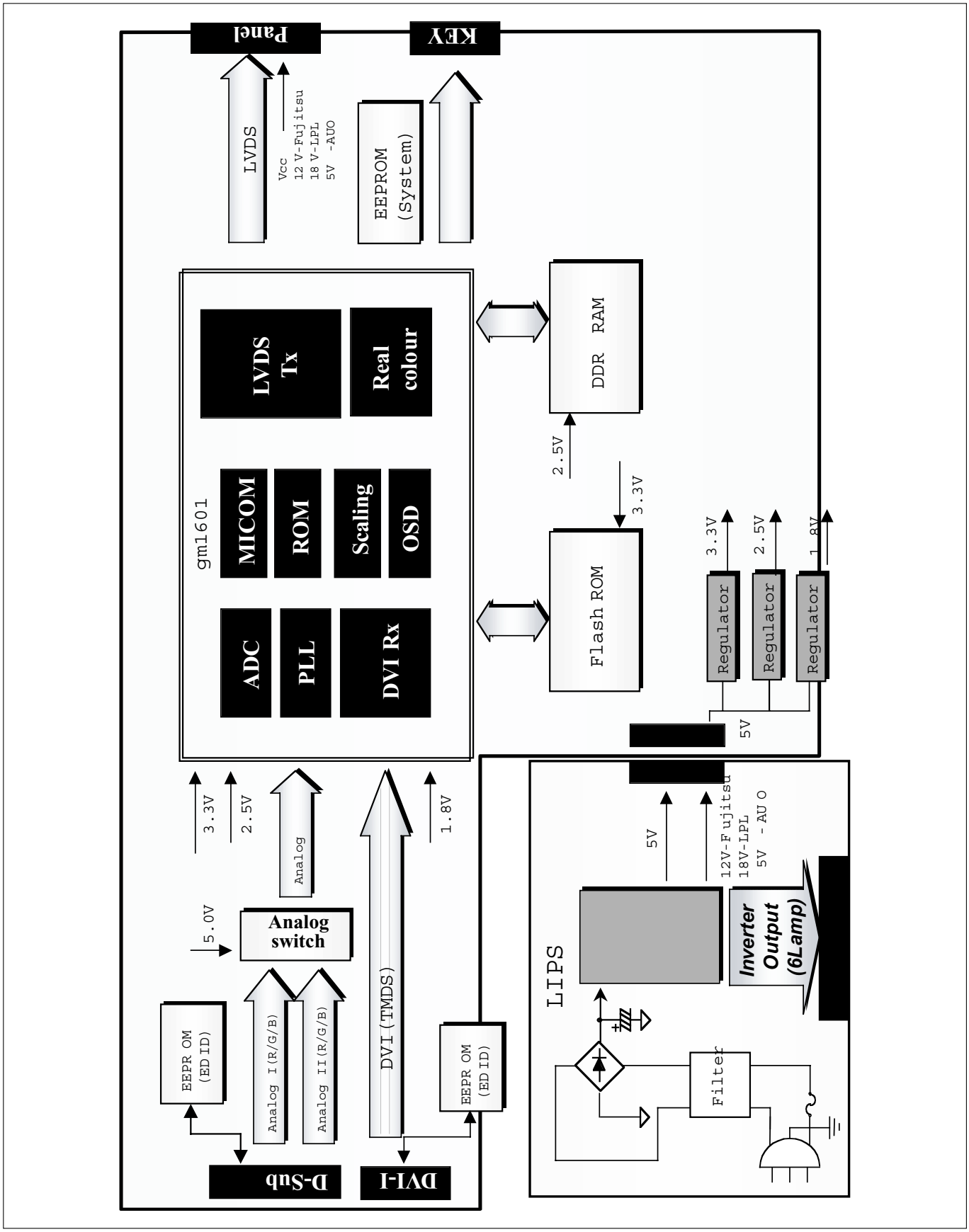
NOTE

- To activate the USB hub function, the display must be connected to a USB compliant PC(OS) or another hub with the USB cable(enclosed).
- When connecting the USB cable, check that the shape of the connector at the cable side matches the shape at the connecting side.
- Even if the display is in a power saving mode, USB compliant devices will function when they are connected the USB ports(both the upstream and downstream) of the display.

WIRING DIAGRAM



BLOCK DIAGRAM



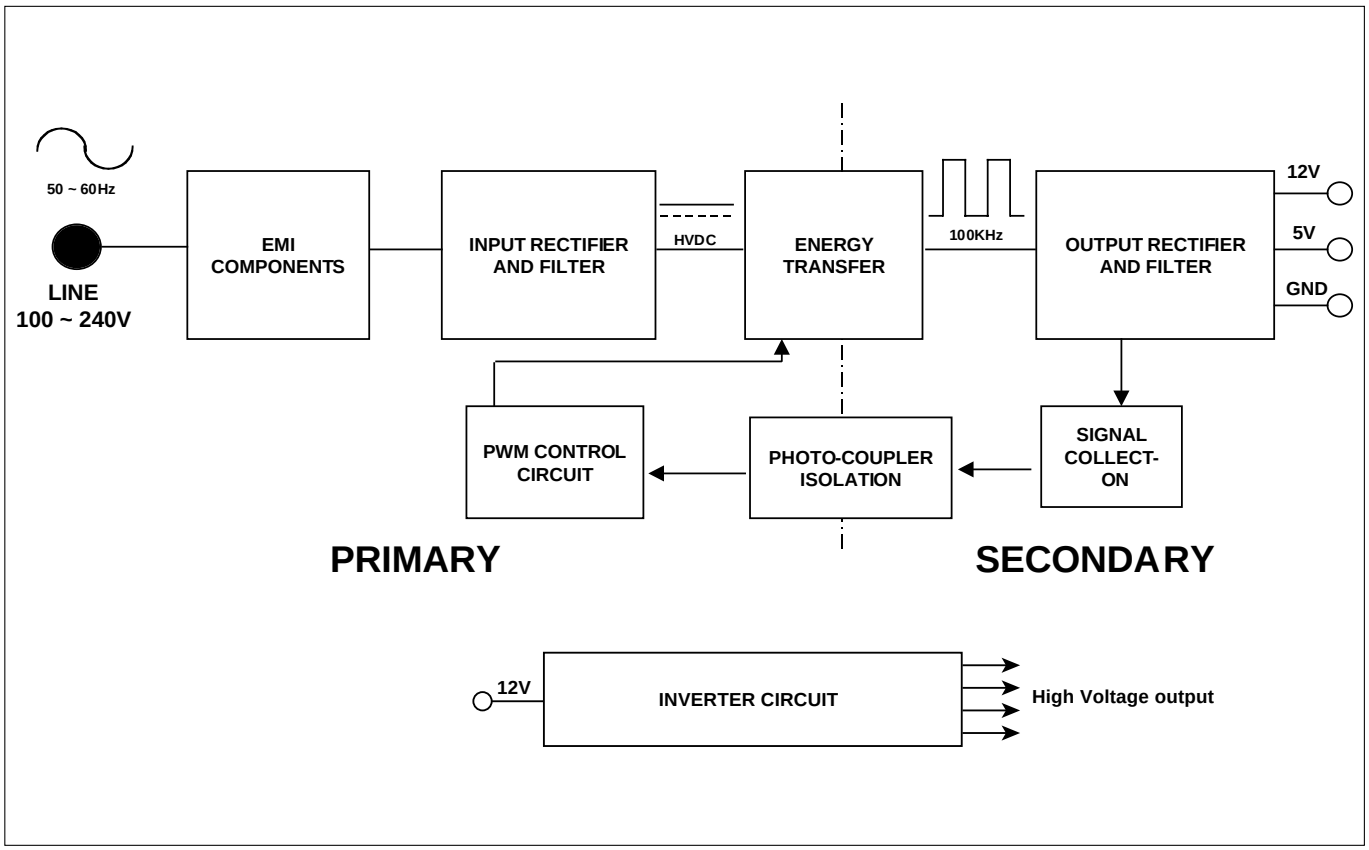
DESCRIPTION OF BLOCK DIAGRAM

1. Video Controller Part & Display Data Transmitter Part.

This part amplifies the level of video signal for the digital conversion and converts from the analog video signal to the digital video signal using a pixel clock.
The pixel clock for each mode is generated by the PLL.
The range of the pixel clock is from 25MHz to 170MHz.
This part consists of the Scaler, Flash-ROM IC which stores program data, Reset IC.
The Scaler gets the video signal converted analog to digital, interpolates input to 1600 * 1200 resolution signal and outputs 8-bit R, G, B signal to transmitter.
Especially pre-amp / ADC / Video controller/ Transmitter are merged to one chip "Gm1601" by Genesis.
This part transmit digital signal from the Scaler to the receiver of module.

2. Power Part

This part consists of the two 3.3V and one 2.5V and one 1.8Vregulators to convert power which is provided 12V in LIPS Board V is provided for LCD Panel.
Also, 5V is converted 3.3V and 2.5V and 1.8V by regulator. Converted power is provided for IC in the main board.



Operation description_Power

1. EMI components.

This part contains of EMI components to comply with global marketing EMI standards like FCC,VCCI CISPR, the circuit included a line-filter, across line capacitor and of course the primary protection fuse.

2. Input rectifier and filter.

This part function is for transfer the input AC voltage to a DC voltage through a bridge rectifier and a bulk capacitor.

3. Energy Transfer.

This part function is for transfer the primary energy to secondary through a power transformer.

4. Output rectifier and filter.

This part function is to make a pulse width modulation control and to provide the driver signal to power switch,to adjust the duty cycle during different AC input and output loading condition to achieve the dc output stabilized, and also the over power protection is also monitor by this part.

5. Photo-Coupler isolation.

This part function is to feed back the dc output changing status through a photo transistor to primary controller to achieve the stabilized dc output voltage.

6. Signal collection.

This part function is to collect the any change from the dc output and feed back to the primary through photo transistor

7. Inverter

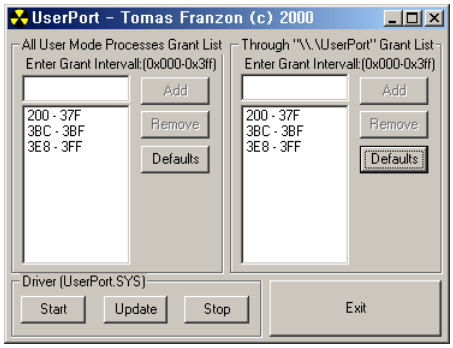
The inverter converts from DC12V to AC 700V and operate back-light lamp of module.

ADJUSTMENT

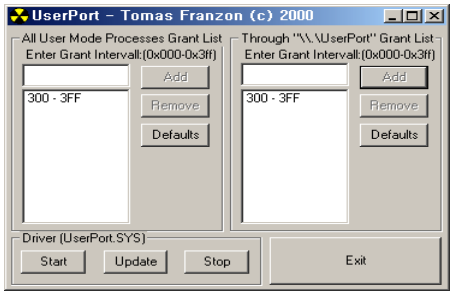
Windows EDID V1.0 User Manual

Operating System: MS Windows 98, 2000, XP
Port Setup: Windows 98 => Doesn't need setup
Windows 2000, XP => Need to Port Setup.
This program is available for LCD Monitor only.

1. Port Setup
   a) Copy "UserPort.sys" file to
   "c:\WINNT\system32\drivers" folder
   b) Run Userport.exe

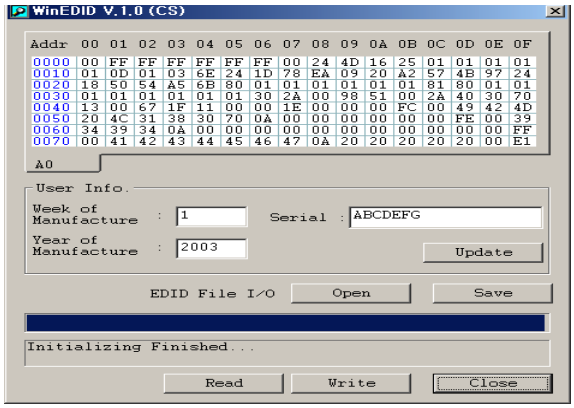


   c) Remove all default number
   d) Add 300-3FF

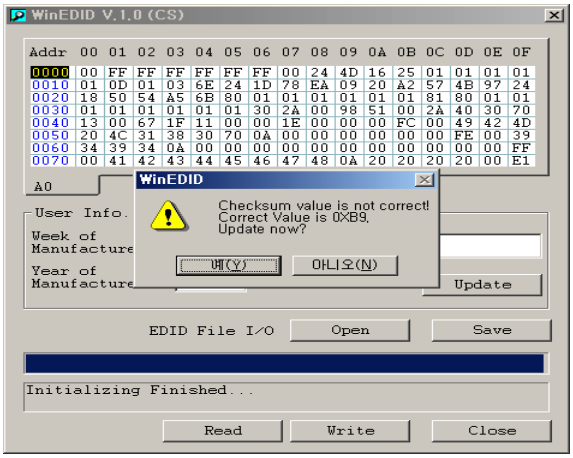


   e) Click Start button.
   f) Click Exit button.

2. EDID Read & Write
   1) Run WinEDID.exe



   2) Edit Week of Manufacture, Year of Manufacture, Serial Number
      a) Input User Info Data
      b) Click "Update" button
      c) Click " Write" button



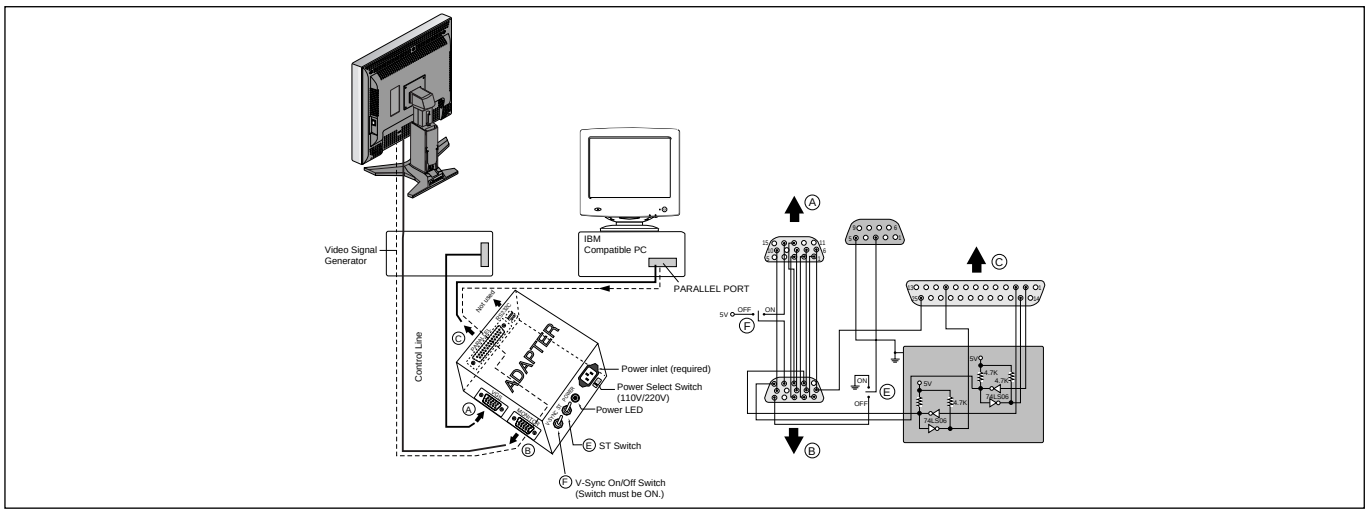
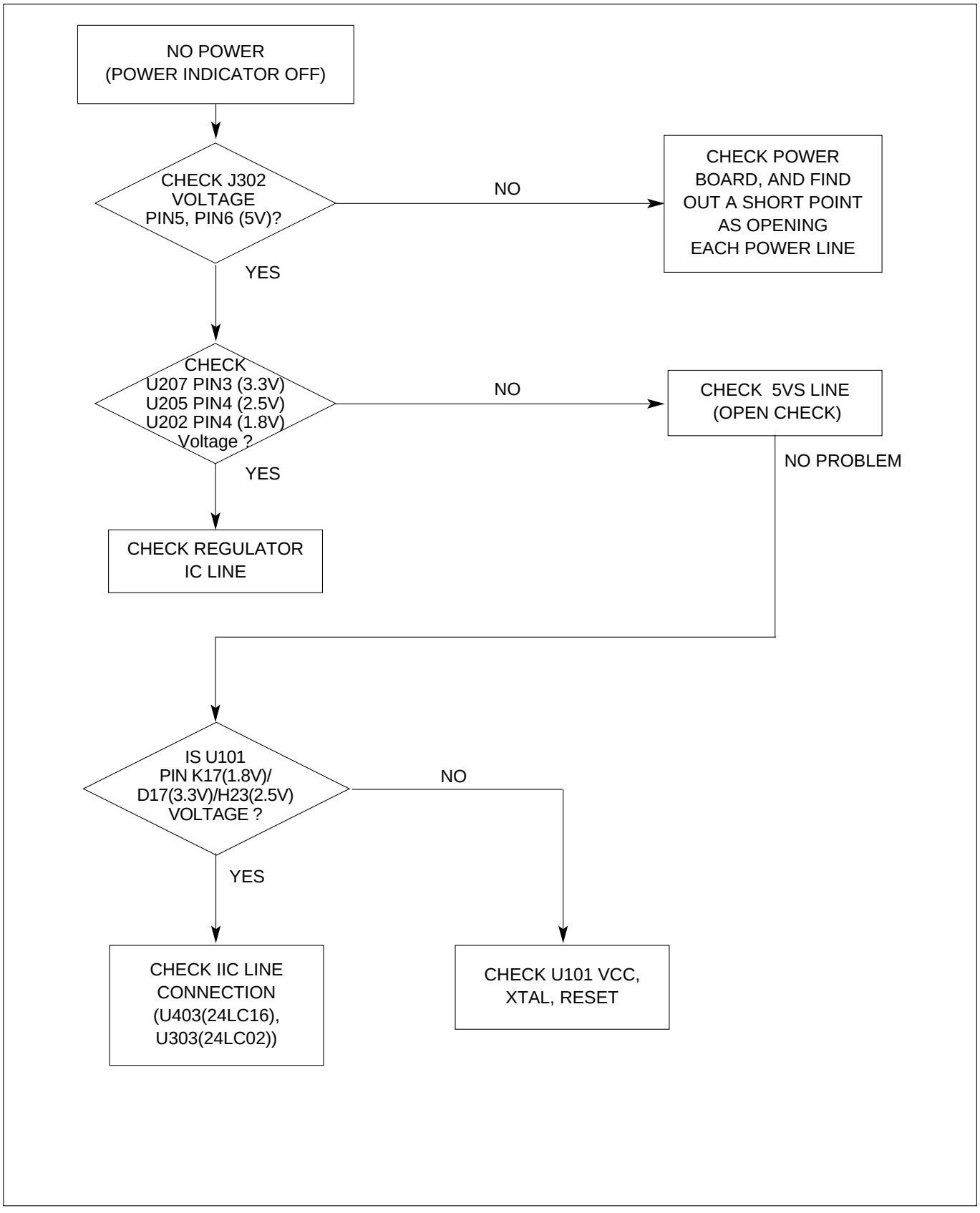


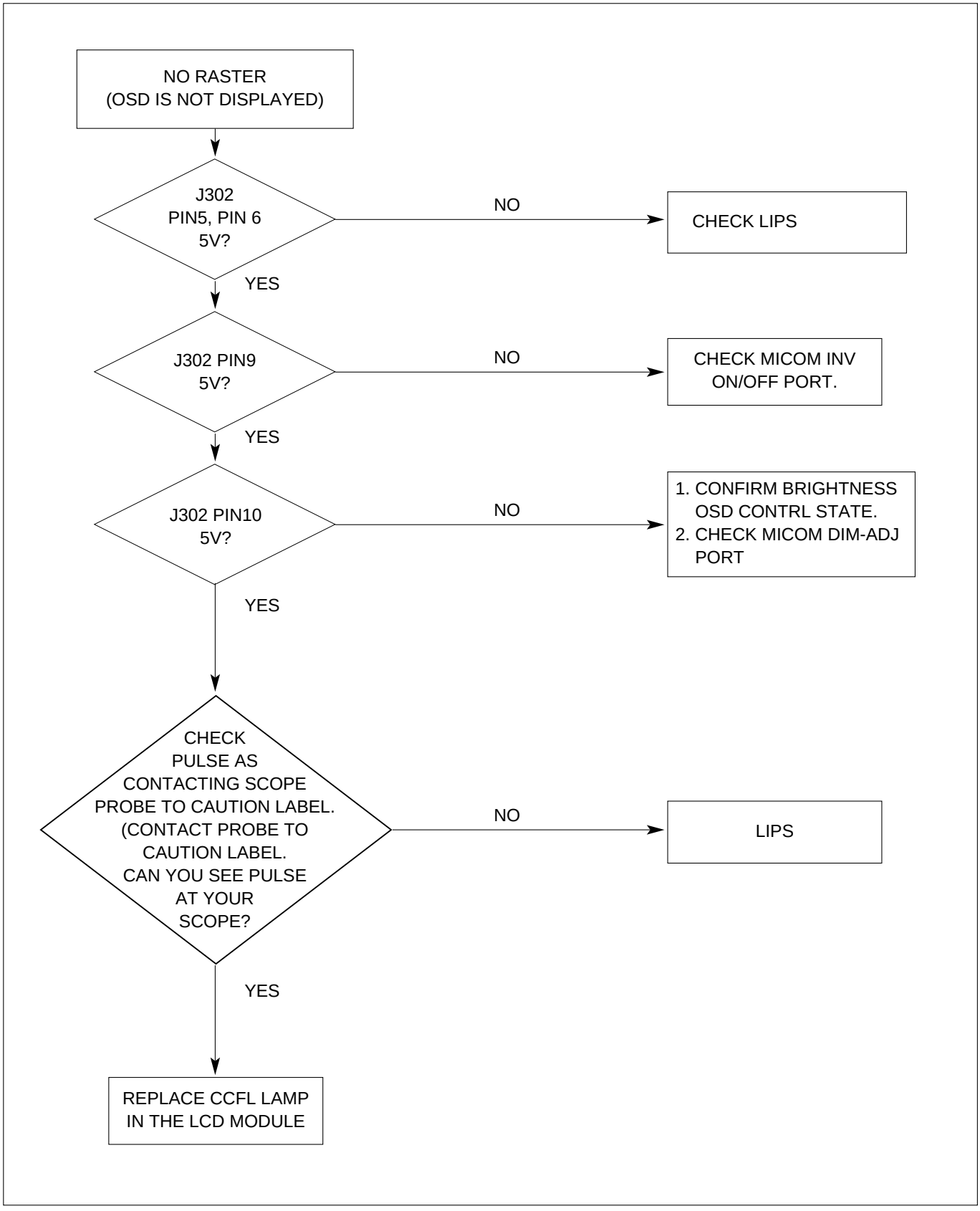
Figure 1. Cable Connection

TROUBLESHOOTING GUIDE

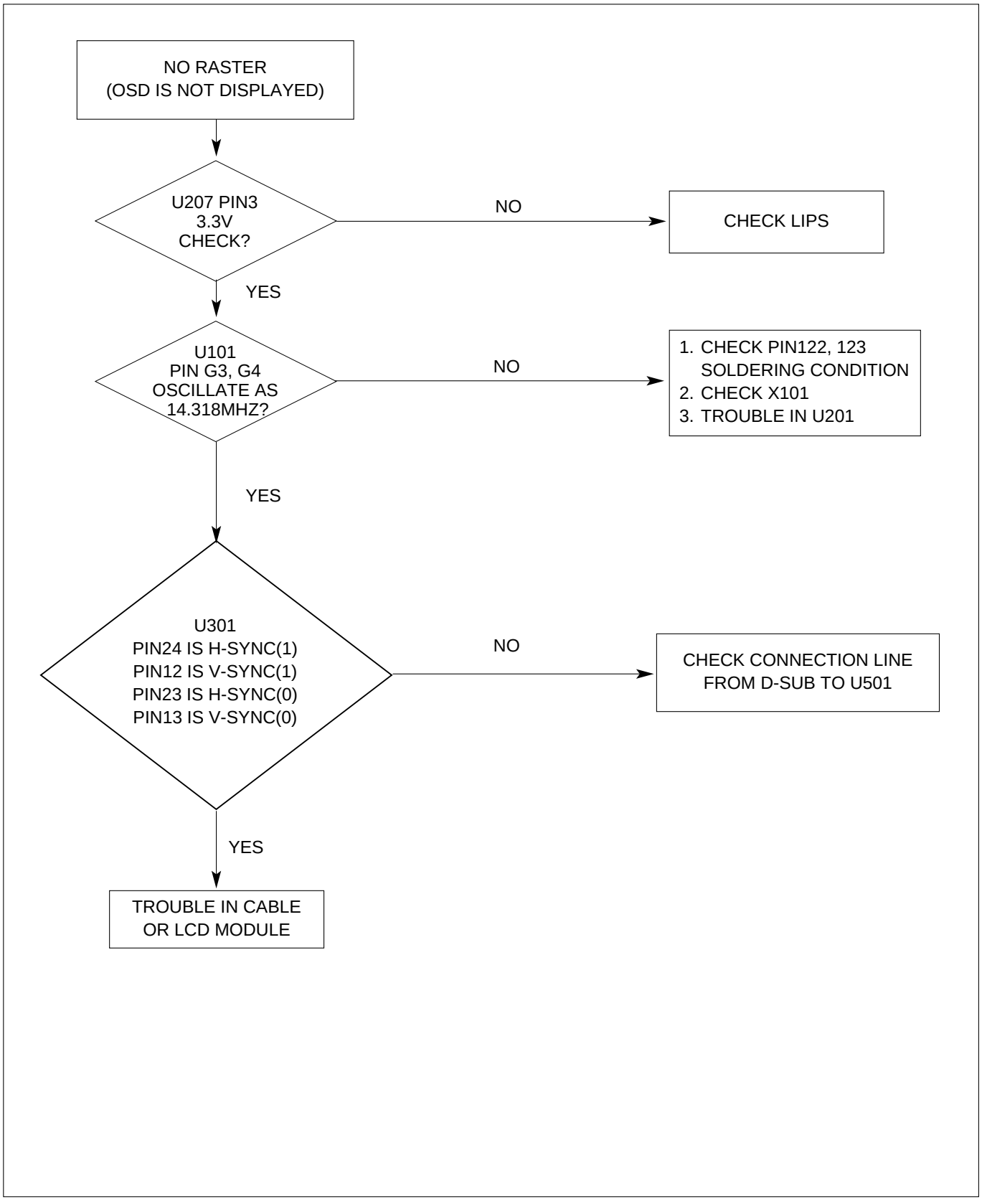
1. NO POWER



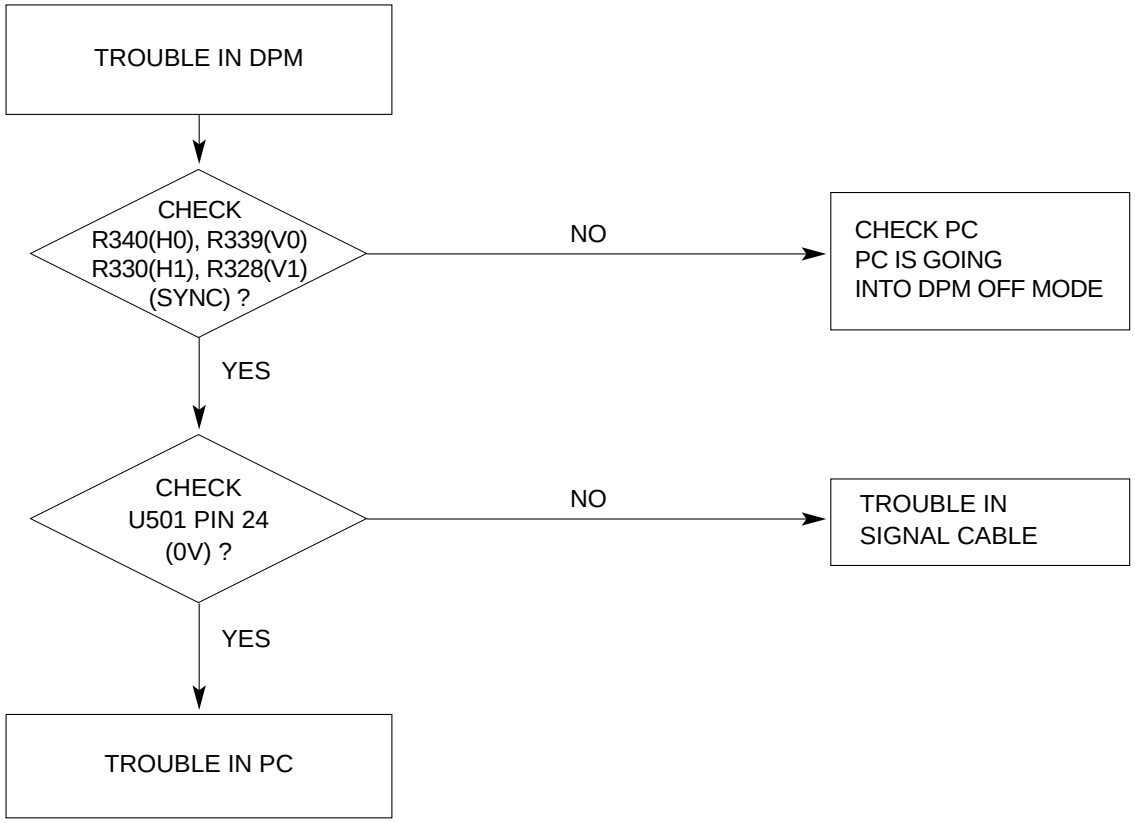
2. NO RASTER (OSD IS NOT DISPLAYED) – LIPS



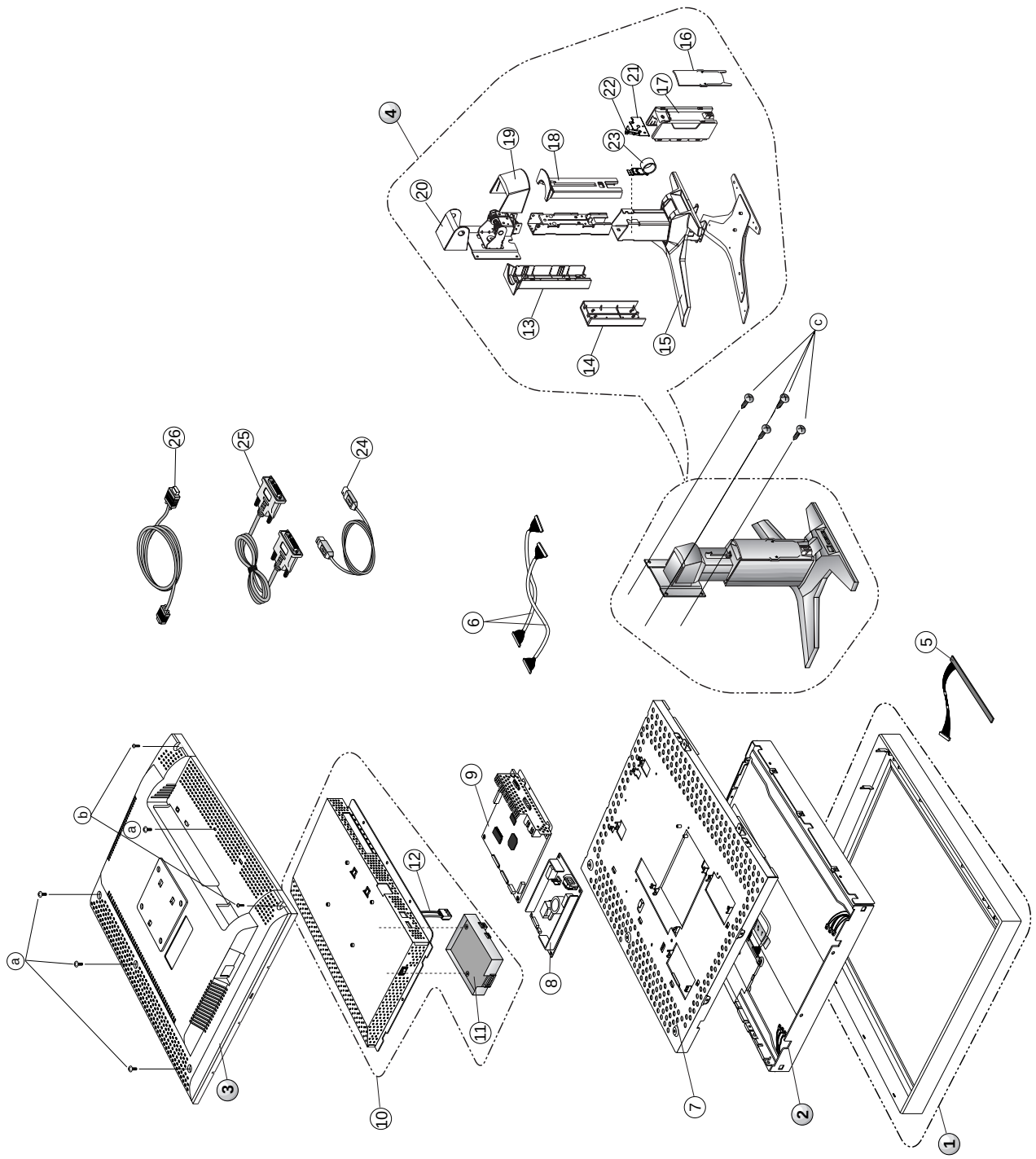
3. NO RASTER (OSD IS NOT DISPLAYED)



4. TROUBLE IN DPM



EXPLODED VIEW



EXPLODED VIEW PARTS LIST

Ref. No.	Part No.	Description
1	3091TKL049W	CABINET ASSEMBLY, L2010PM BRAND 051 IPS TCO03 USB
	3091TKL113B	CABINET ASSEMBLY, L2010PM BRAND 051 IPS TCO03 USB RED LG(ALPAQ)
	3091TKL113A	CABINET ASSEMBLY, L2010PM BRAND 051 IPS TCO03 USB US(ALUSQ)
2	6304FLP130A	LCD(LIQUID CRYSTAL DISPLAY) , "LM201U04-A3K5 LG PHILPS TFT COLOR UXGA,250NITS,8BITS,LVDS,4MASK"
3	3809TKL031J	BACK COVER ASSEMBLY, L2010BM 037A .
	3809TKL031M	BACK COVER ASSEMBLY, L2010PM 037 US(ALUSQ)
4	3043TKK105D	TILT SWIVEL ASSEMBLY, L2010PM 222F USB
5	6871TST582A	"PWB(PCB) ASSEMBLY,SUB", L2010P(B)M CONTROL TOTAL BRAND CL-63
6	6631T11016J	CONNECTOR ASSEMBLY, 30P H-H 100MM UL20276 AWG30 LB200A LPL
7	4951TKK100G	METAL ASSEMBLY, FRAME L2010
8	6871TPT270B	"PWB(PCB) ASSEMBLY,POWER", "L2010 POWER TOTAL LIEN CHANG 20.1"" LIPS FOR LPL"
9	3313TL2020A	MAIN TOTAL ASSEMBLY, L2010P(B)M_LPL BRAND CL-63
10	4951TKK098G	METAL ASSEMBLY, REAR L2010B
11	6871TUT015A	"PWB(PCB) ASSEMBLY,USB", LB886F SUB TOTAL BRAND CL-29
12	6631T25005F	CONNECTOR ASSEMBLY, SWITCH(GY)+CONN ASSYP H-W 260MM UL 1617 AWG 22 LB200A
13	3550TKK220D	COVER, LB200A TOP FRONT POLYACETAL 87074
14	3550TKK218E	COVER, LB200A STAND FRONT ABS HF350U 87074
15	3550TKK222F	COVER, L1910PL BASE TOP HF350U 87074(USB)
16	3550TKK223E	COVER, LB200A CABLE COVER ABS HF350U 87074
17	3550TKK219E	COVER, LB200A STAND REAR ABS HF350U 87074
18	3550TKK221D	COVER, LB200A TOP REAR POLYACETAL 87074
19	3550TKK217E	COVER, LB200A HINGE REAR ABS HF350U 87074
20	3550TKK216E	COVER, LB200A HINGE TOP ABS HF350U 87074
21	4950TKK346A	METAL, "PLATE STOPPER,LB886F"
22	3550TKK224C	COVER, "LW900Z PIECE LOCK PC IDEMITSU IR1900, CRYSTAL"
23	4970TKK009A	"SPRING,COIL", COIL - FOR STAND T=4.5 LB200A
24	6866TDU002D	"CABLE,D-SUB", UL20276SB10P+2C AWG#30 DT 1870MM GRAY(85964) BRAND DM
25	6866TDV004C	"CABLE,DVI", UL20276 DT 2000MM GRAY(85964) LB885C DM
26	6850TD9001J	"CABLE,D-SUB", UL 2990-9C(7.5) DT 1870MM PEARL WH T541K DM
a	1SZZTER001G	"SCREW,DRAWING", D3.0 L6.0 MSWR/BK .
b	332-113S	"SCREW,DRAWING", D3.0 L12.0 MSWR/BK .
c	332-105G	"SCREW,DRAWING", PVS+4*10(MSWR/BK)

REPLACEMENT PARTS LIST

CAUTION: BEFORE REPLACING ANY OF THESE COMPONENTS,
READ CAREFULLY THE **SAFETY PRECAUTIONS** IN THIS MANUAL.
* NOTE : **S** SAFETY Mark ⚠
AL ALTERNATIVE PARTS

DATE: 2004. 03. 23.

*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		MAIN BOARD		
		CAPACITORS		
		C101	0CE107EF610	"100UF KMG,RD 16V 20% FL BULK"
		C103	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C104	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C105	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C106	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C107	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C109	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C110	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C111	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C112	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C113	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C114	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C115	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C116	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C117	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C118	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C119	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C120	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C121	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C122	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C123	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C124	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C125	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C126	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C127	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C128	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C129	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C130	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C131	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C135	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C136	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C137	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C138	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C140	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C141	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C147	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C148	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C149	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C150	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C151	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C152	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C155	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C165	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C169	0CH6102K406	1000PF 50V J SL 2012 R/TP
		C170	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C201	0CK105DK94A	"1UF 2012 50V 80%,-20% R/TP F("
		C203	0CZZTAT005D	RJ4-16V471MX ELNA 16V 470UF 2
		C204	0CZZTAT005D	RJ4-16V471MX ELNA 16V 470UF 2
		C205	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C206	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C207	0CE107EF610	"100UF KMG,RD 16V 20% FL BULK"
		C208	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R

DATE: 2004. 03. 23.

*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C209	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C210	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C211	0CE477EH618	470UF KMG 25V M FL TP 5
		C212	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C213	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C214	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C215	0CH6102K406	1000PF 50V J SL 2012 R/TP
		C217	0CE107EF610	"100UF KMG,RD 16V 20% FL BULK"
		C219	0CE107EF610	"100UF KMG,RD 16V 20% FL BULK"
		C220	0CE477EH618	470UF KMG 25V M FL TP 5
		C221	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C222	0CZZTAT005D	RJ4-16V471MX ELNA 16V 470UF 2
		C224	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C225	0CZZTAT005G	RJ4-16V221MF3#-T36 ELNA 16V 2
		C227	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C229	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C230	0CE107EF610	"100UF KMG,RD 16V 20% FL BULK"
		C231	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C233	0CZZTAT005C	RJ4-25V101MX ELNA 25V 100UF 2
		C301	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C302	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP F("
		C303	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C304	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C305	0CE107EF610	"100UF KMG,RD 16V 20% FL BULK"
		C306	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C307	0CC471CK41A	470PF 1608 50V 5% R/TP NP0
		C308	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C309	0CZZTAT008D	RVS-6V470MU-R ELNA 6.3V 47UF
		C310	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C311	0CE107EF610	"100UF KMG,RD 16V 20% FL BULK"
		C312	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/TP"
		C313	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C314	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C315	0CZZTAT008D	RVS-6V470MU-R ELNA 6.3V 47UF
		C316	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C317	0CZZTAT008D	RVS-6V470MU-R ELNA 6.3V 47UF
		C318	0CC680CK41A	68PF 1608 50V 5% R/TP NP0
		C319	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C320	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C321	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C322	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C323	0CC680CK41A	68PF 1608 50V 5% R/TP NP0
		C324	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C325	0CZZTAT008D	RVS-6V470MU-R ELNA 6.3V 47UF
		C326	0CC680CK41A	68PF 1608 50V 5% R/TP NP0
		C327	0CZZTAT008D	RVS-6V470MU-R ELNA 6.3V 47UF
		C328	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C330	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C333	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C334	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C335	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C337	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C341	0CC680CK41A	68PF 1608 50V 5% R/TP NP0
		C342	0CZZTAT008D	RVS-6V470MU-R ELNA 6.3V 47UF

DATE: 2004. 03. 23.

*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C343	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C344	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C345	0CK105DK94A	"1UF 2012 50V 80%,-20% R/TP F("
		C346	0CK105DK94A	"1UF 2012 50V 80%,-20% R/TP F("
		C347	0CK105DK94A	"1UF 2012 50V 80%,-20% R/TP F("
		C349	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C350	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C352	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C354	0CC080CK11A	8PF 1608 50V 0.5 PF R/TP NP0
		C357	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C358	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C360	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP F("
		C361	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C362	0CC080CK11A	8PF 1608 50V 0.5 PF R/TP NP0
		C363	0CK105DK94A	"1UF 2012 50V 80%,-20% R/TP F("
		C364	0CH5100K416	10PF 50V 5% NP0 2012 R/TP
		C365	0CH5100K416	10PF 50V 5% NP0 2012 R/TP
		C401	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C402	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C403	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C404	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C405	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C406	0CE107EF610	"100UF KMG,RD 16V 20% FL BULK"
		C407	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C408	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C409	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C410	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C411	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C412	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C611	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		DIODEs		
		D301	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D302	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D303	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D304	0DD184009AA	KDS184 TP KEC - 85V - - - 300
		D316	0DD184009AA	KDS184 TP KEC - 85V - - - 300
		D317	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D318	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D319	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		ZD301	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD302	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD303	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD304	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD305	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD306	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD307	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD308	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD309	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD310	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD311	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD312	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD315	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD316	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD317	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD318	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD319	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD320	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD321	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD322	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD323	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2

DATE: 2004. 03. 23.

*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION20
		ICs		
		U101	0IPRPGN007A	"GM1601,A&D&VIDEO GENESIS 416P"
		U102	0IKE704200H	KIA7042AP TO-92 TP 4.2 VOLT.
		U201	0TFIR80009B	IRF7316 INTERNATIONAL RECTIFI
		U202	0IPMGFA003D	FAN1117AS-1.8 FAIRCHILD 4P SO
		U204	0TFFC80009A	FAIRCHILD FDC6326L R/TP SOT-6
		U205	0IPMGFA003E	FAN1086-1.5A FAIRCHILD SOT252
		U206	0IRH033200A	BA033FP-E2 MOLD-3 TP REGULATO
		U207	0IRH033200A	BA033FP-E2 MOLD-3 TP REGULATO
		U301	0IRH765700B	"BA7657F 24P,SOP TP INPUT SIG."
		U303	0IMMRSG036A	"M24C02-WMN6T SGS-THOMSON 8P,S"
		U304	0IMMRSG036A	"M24C02-WMN6T SGS-THOMSON 8P,S"
		U305	0DRCE00028A	CM1213-08MS CAMD R/TP MSOP 10
		U306	0DRCE00028A	CM1213-08MS CAMD R/TP MSOP 10
		U307	0DRCE00028A	CM1213-08MS CAMD R/TP MSOP 10
		U401	0IZZTSZ432A	MACRONIX/ATMEL 32PIN PLCC ST
		U402	0IMMRAL035A	"AT49BV040A-70JI ATMEL 32P,PLC"
		U403	0IMMRSG036B	M24C16-WMN6T SGS-THOMSON 8PIN
		COILs & COREs		
		L101	6210TCE001E	HB-1M2012-800JT CERATEC 2012M
		L102	6210TCE001E	HB-1M2012-800JT CERATEC 2012M
		L201	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L202	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L203	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L204	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L206	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L207	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L208	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L209	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L210	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L211	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L212	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L301	6210TCE001S	HU-1M2012-121 CERATECH 2012MM
		L307	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L308	0RH0000D622	0 1/10W P-TYPE TAPPING
		L309	0RH0000D622	0 1/10W P-TYPE TAPPING
		TRANSISTOR		
		Q201	0TR162309CA	KSC1623 TP SAMSUNG SOT23 NPN
		Q301	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP
		Q302	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP
		Q303	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP
		Q304	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP
		Q305	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP
		Q306	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP
		Q307	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP
		Q308	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP
		RESISTORs		
		R101	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R104	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R105	0RH1002D622	10K OHM 1 / 10 W 2012 5.00% D
		R106	0RH1002D622	10K OHM 1 / 10 W 2012 5.00% D
		R108	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R110	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R111	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R112	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R115	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP

DATE: 2004. 03. 23.

*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R116	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R117	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R119	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R120	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R121	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R122	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R123	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R126	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R127	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R128	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R131	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R132	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R134	0RH0000D622	0 1/10W P-TYPE TAPPING
		R135	0RH0000D622	0 1/10W P-TYPE TAPPING
		R136	0RH0000D622	0 1/10W P-TYPE TAPPING
		R137	0RH0000D622	0 1/10W P-TYPE TAPPING
		R138	0RH0000D622	0 1/10W P-TYPE TAPPING
		R139	0RH0000D622	0 1/10W P-TYPE TAPPING
		R140	0RH2700D622	270 1/10W 5 D.R/TP
		R142	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R143	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R147	0RH2701D622	2.7K 1/10W 5 D.R/TP
		R148	0RH0000D622	0 1/10W P-TYPE TAPPING
		R151	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R152	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R153	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R154	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R155	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R156	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R157	0RJ3302D677	33K OHM 1/10 W 5% 1608 R/TP
		R158	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R163	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R164	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R165	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R170	0RH0472D622	47 1/10W 5 D.R/TP
		R202	0RH1002D622	10K OHM 1 / 10 W 2012 5.00% D
		R203	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R206	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R208	0RH0000D622	0 1/10W P-TYPE TAPPING
		R209	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R210	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R221	0RH0471D622	4.7 1/10W 5 D.R/TP
		R222	0RH0471D622	4.7 1/10W 5 D.R/TP
		R223	0RH0471D622	4.7 1/10W 5 D.R/TP
		R224	0RH0471D622	4.7 1/10W 5 D.R/TP
		R225	0RH0471D622	4.7 1/10W 5 D.R/TP
		R226	0RH0471D622	4.7 1/10W 5 D.R/TP
		R227	0RH0471D622	4.7 1/10W 5 D.R/TP
		R228	0RH0471D622	4.7 1/10W 5 D.R/TP
		R229	0RH0471D622	4.7 1/10W 5 D.R/TP
		R230	0RH0471D622	4.7 1/10W 5 D.R/TP
		R300	0RH0000D622	0 1/10W P-TYPE TAPPING
		R301	0RH0000D622	0 1/10W P-TYPE TAPPING
		R303	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R305	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R307	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R308	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R309	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R310	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R311	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R312	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R313	0RJ0562D677	56 OHM 1/10 W 5% 1608 R/TP

DATE: 2004. 03. 23.

*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R314	0RJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R315	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R316	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R317	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R318	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R319	0RH6802D622	68K 1/10W 5 D.R/TP
		R320	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R321	0RJ4703D677	470K OHM 1/10 W 5% 1608 R/TP
		R322	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R323	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R324	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R325	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R326	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R327	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R328	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R329	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R330	0RJ0682D677	68 OHM 1/10 W 5% 1608 R/TP
		R331	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R332	0RH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R333	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R334	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R335	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R336	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R337	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R338	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R339	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R340	0RJ0682D677	68 OHM 1/10 W 5% 1608 R/TP
		R341	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R342	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R343	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R344	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R345	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R346	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R347	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R348	0RJ0102D677	10 OHM 1/10 W 5% 1608 R/TP
		R349	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R350	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R351	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R353	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R354	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R355	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R356	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R357	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R358	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R359	0RJ0102D677	10 OHM 1/10 W 5% 1608 R/TP
		R360	0RJ0102D677	10 OHM 1/10 W 5% 1608 R/TP
		R361	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R363	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R364	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R365	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R366	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R367	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R368	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R370	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R371	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R372	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R373	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R374	0RH1500D622	150 1/10W 5 D.R/TP
		R376	0RH1500D622	150 1/10W 5 D.R/TP
		R378	0RH1500D622	150 1/10W 5 D.R/TP
		R379	0RJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R380	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP

DATE: 2004. 03. 23.

*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R382	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R383	0RJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R384	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R385	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R386	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R387	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R389	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R391	0RJ0102D677	10 OHM 1/10 W 5% 1608 R/TP
		R392	0RJ0102D677	10 OHM 1/10 W 5% 1608 R/TP
		R393	0RJ0102D677	10 OHM 1/10 W 5% 1608 R/TP
		R394	0RH0000D622	0 1/10W P-TYPE TAPPING
		R395	0RH0000D622	0 1/10W P-TYPE TAPPING
		R396	0RH0000D622	0 1/10W P-TYPE TAPPING
		R398	0RJ0102D677	10 OHM 1/10 W 5% 1608 R/TP
		R399	0RJ0102D677	10 OHM 1/10 W 5% 1608 R/TP
		R400	0RH0000D622	0 1/10W P-TYPE TAPPING
		R401	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R402	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R403	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R404	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R405	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R406	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R407	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R408	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R409	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R410	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R412	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R413	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R414	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R415	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R416	0RH1002D622	10K OHM 1 / 10 W 2012 5.00% D
		R417	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R418	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R419	0RH0000D622	0 1/10W P-TYPE TAPPING
		R450	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R451	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
	OTHERs			
		RA101	0RHZTCZ001D	RCA86TRJ22R0 SMART 22OHM 1/16
		RA102	0RHZTCZ001D	RCA86TRJ22R0 SMART 22OHM 1/16
		RA103	0RHZTCZ001D	RCA86TRJ22R0 SMART 22OHM 1/16
		RA104	0RHZTCZ001D	RCA86TRJ22R0 SMART 22OHM 1/16
		RA105	0RHZTCZ001D	RCA86TRJ22R0 SMART 22OHM 1/16
		RA106	0RHZTCZ001D	RCA86TRJ22R0 SMART 22OHM 1/16
		RA107	0RHZTCZ001D	RCA86TRJ22R0 SMART 22OHM 1/16
		RA108	0RHZTCZ001D	RCA86TRJ22R0 SMART 22OHM 1/16
		RA109	0RHZTCZ001D	RCA86TRJ22R0 SMART 22OHM 1/16
		RA110	0RHZTCZ001D	RCA86TRJ22R0 SMART 22OHM 1/16
		RA111	0RHZTCZ001D	RCA86TRJ22R0 SMART 22OHM 1/16
		X101	6202TST001A	"SX-1 SUNNY ,SMS, 14.31818MHZ"
	CONTROL BOARD			
		LED1	0DLRH0058AA	ROHM SML-521MYWT86 R/TP GREEN
		R1	0RJ1501D677	1.5K OHM 1/10 W 5% 1608 R/TP
		R2	0RJ1501D677	1.5K OHM 1/10 W 5% 1608 R/TP
		R3	0RJ1501D677	1.5K OHM 1/10 W 5% 1608 R/TP
		R4	0RJ2701D677	2.7K OHM 1/10 W 5% 1608 R/TP
		R5	0RJ2701D677	2.7K OHM 1/10 W 5% 1608 R/TP
		R6	0RJ2701D677	2.7K OHM 1/10 W 5% 1608 R/TP
		R7	0RJ7501D677	7.5K OHM 1/10 W 5% 1608 R/TP

DATE: 2004. 03. 23.

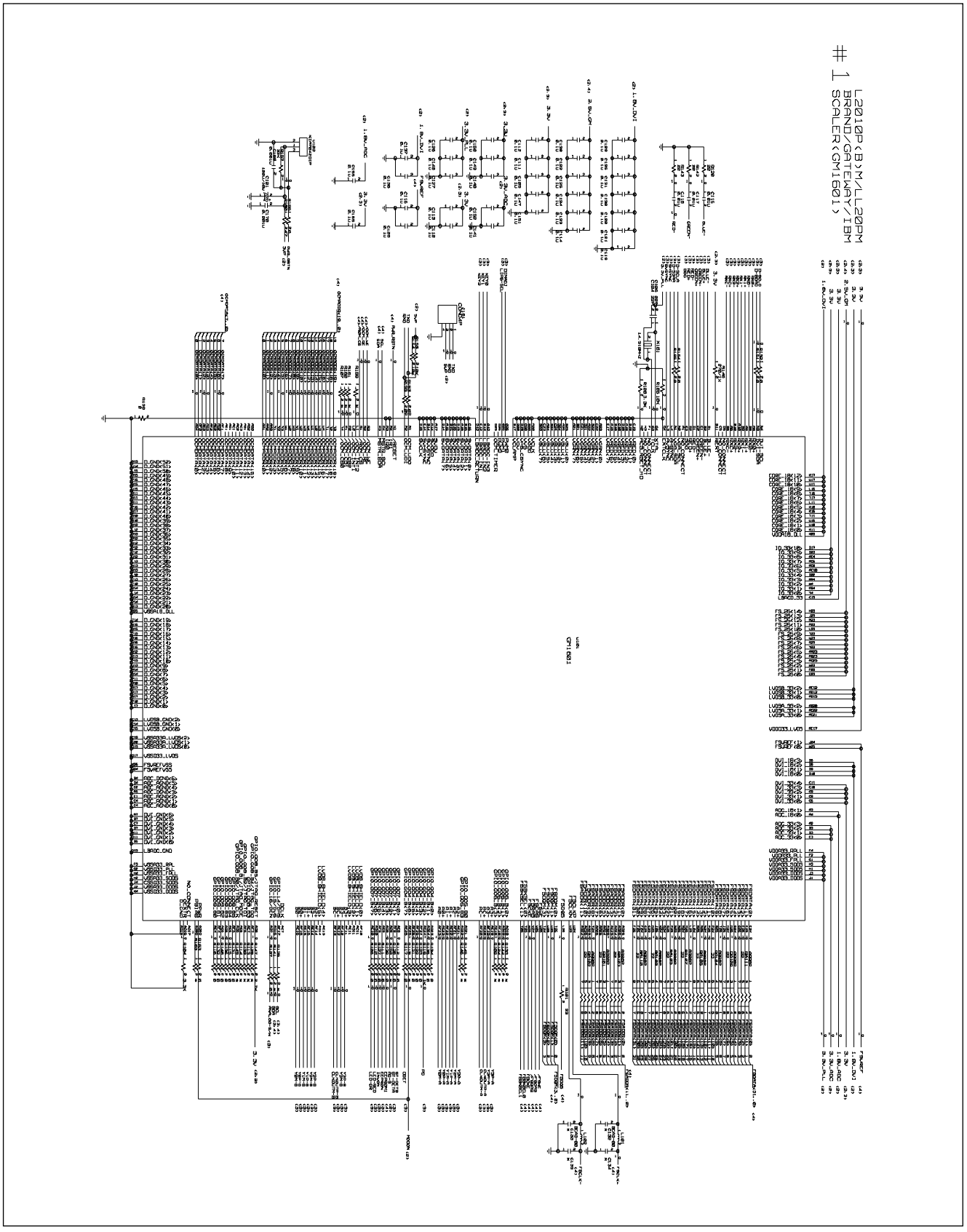
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		SW1	140-058E	SKHV10910B LGEC NON 12V 20A H
		SW10	140-058E	SKHV10910B LGEC NON 12V 20A H
		SW2	140-058E	SKHV10910B LGEC NON 12V 20A H
		SW3	140-058E	SKHV10910B LGEC NON 12V 20A H
		SW4	140-058E	SKHV10910B LGEC NON 12V 20A H
		SW5	140-058E	SKHV10910B LGEC NON 12V 20A H
		SW7	140-058E	SKHV10910B LGEC NON 12V 20A H
		SW8	140-058E	SKHV10910B LGEC NON 12V 20A H
		SW9	140-058E	SKHV10910B LGEC NON 12V 20A H
		ZD1	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD2	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD3	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD4	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD5	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
	USB BOARD			
		C1	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C18	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C2	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C23	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C24	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C25	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C27	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C28	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5
		C31	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C32	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C37	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C38	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C39	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C6	0CH3105F946	1UF 16V Z F 2012 R/TP
		C8	0CC150CK41A	15PF 1608 50V 5% R/TP NP0
		C9	0CC150CK41A	15PF 1608 50V 5% R/TP NP0
		D1	0DS181009AA	KDS181 TP KEC SOT-23 80V 30
		L13	6210TCE001B	HH-1H3216-500JT CERATEC 3216M
		L14	6210TCE001P	HB-1S2012-121JT CERATECH 2012
		L15	6210TCE001P	HB-1S2012-121JT CERATECH 2012
		L16	6210TCE001P	HB-1S2012-121JT CERATECH 2012
		L17	6210TCE001P	HB-1S2012-121JT CERATECH 2012
		L18	6210TCE001B	HH-1H3216-500JT CERATEC 3216M
		L19	6210TCE001P	HB-1S2012-121JT CERATECH 2012
		L20	6210TCE001P	HB-1S2012-121JT CERATECH 2012
		L4	6210TCE001P	HB-1S2012-121JT CERATECH 2012
		L5	6210TCE001P	HB-1S2012-121JT CERATECH 2012
		R1	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R19	0RJ1502D677	15K OHM 1/10 W 5% 1608 R/TP
		R2	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R21	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R22	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R23	0RJ1502D677	15K OHM 1/10 W 5% 1608 R/TP
		R24	0RJ1502D677	15K OHM 1/10 W 5% 1608 R/TP
		R25	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R26	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R28	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R30	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R31	0RJ1502D677	15K OHM 1/10 W 5% 1608 R/TP
		R32	0RJ1502D677	15K OHM 1/10 W 5% 1608 R/TP
		R34	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R35	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R37	0RJ1501D677	1.5K OHM 1/10 W 5% 1608 R/TP
		R40	0RJ1501D677	1.5K OHM 1/10 W 5% 1608 R/TP
		R41	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP

DATE: 2004. 03. 23.

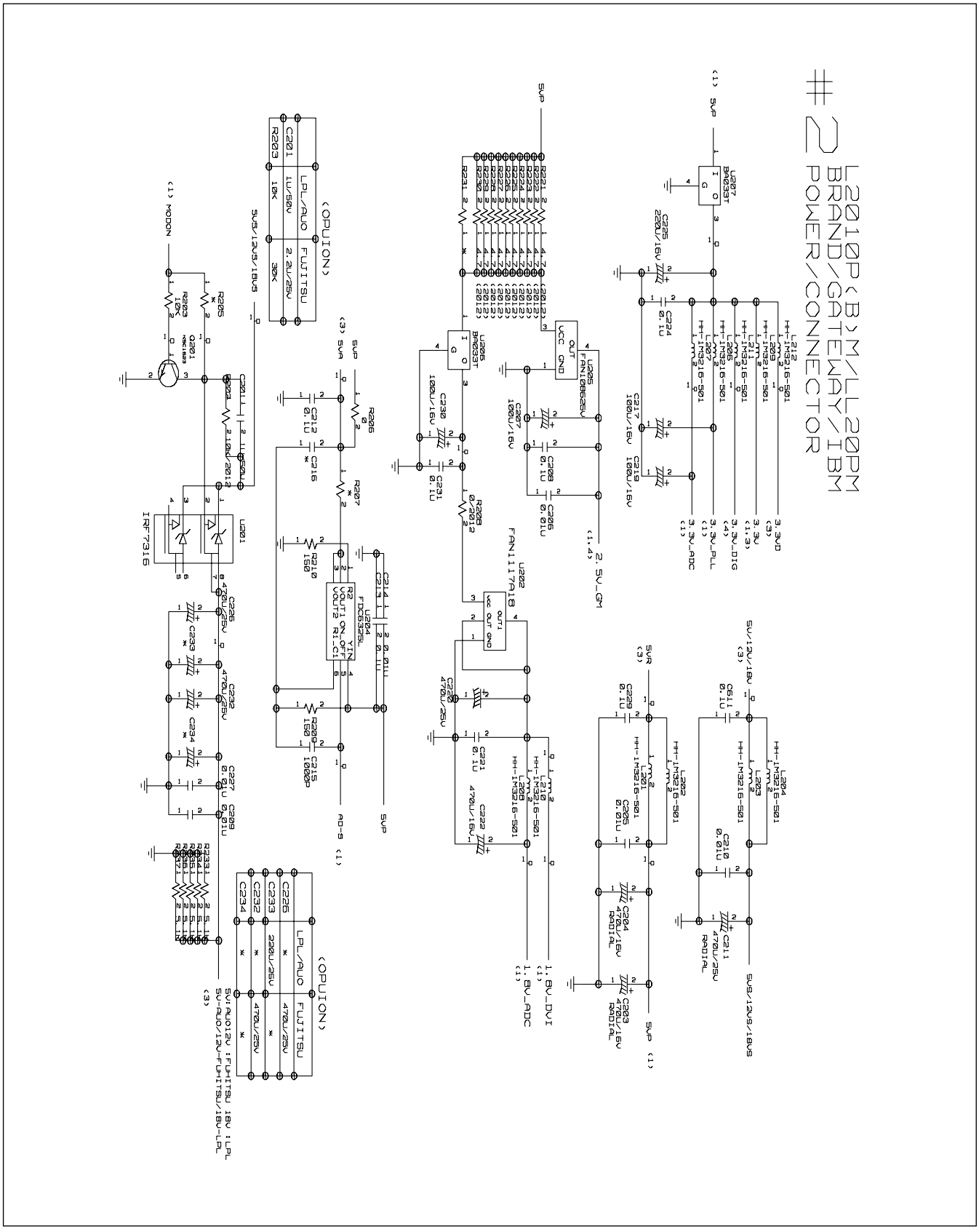
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R8	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R9	0RJ1501D677	1.5K OHM 1/10 W 5% 1608 R/TP
		U1	0IRH033200A	BA033FP-E2 MOLD-3 TP REGULATO
		U2	0IPRPTI007A	TUSB2036 TEXAS INSTRUMENT 32P
		U3	0ITI204200B	TPS2042ADR TEXAS INSTRUMENT 8
		X1	6202TST001C	"SX-1, SUNNY SMD, 6.0MHZ ,50PP"
		ZD1	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD11	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD12	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD4	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD7	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2
		ZD8	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 2

SCHEMATIC DIAGRAM

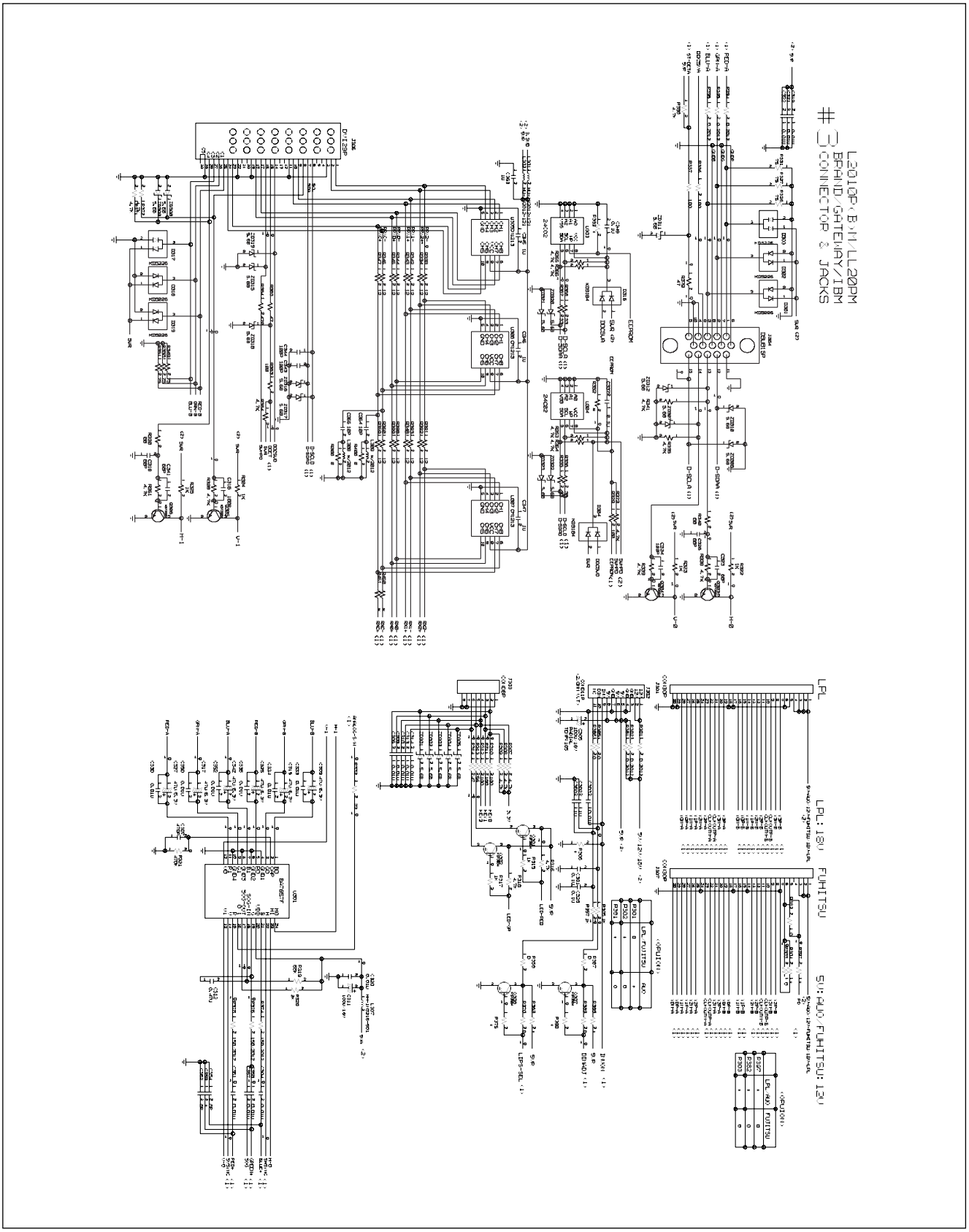
1. SCALER



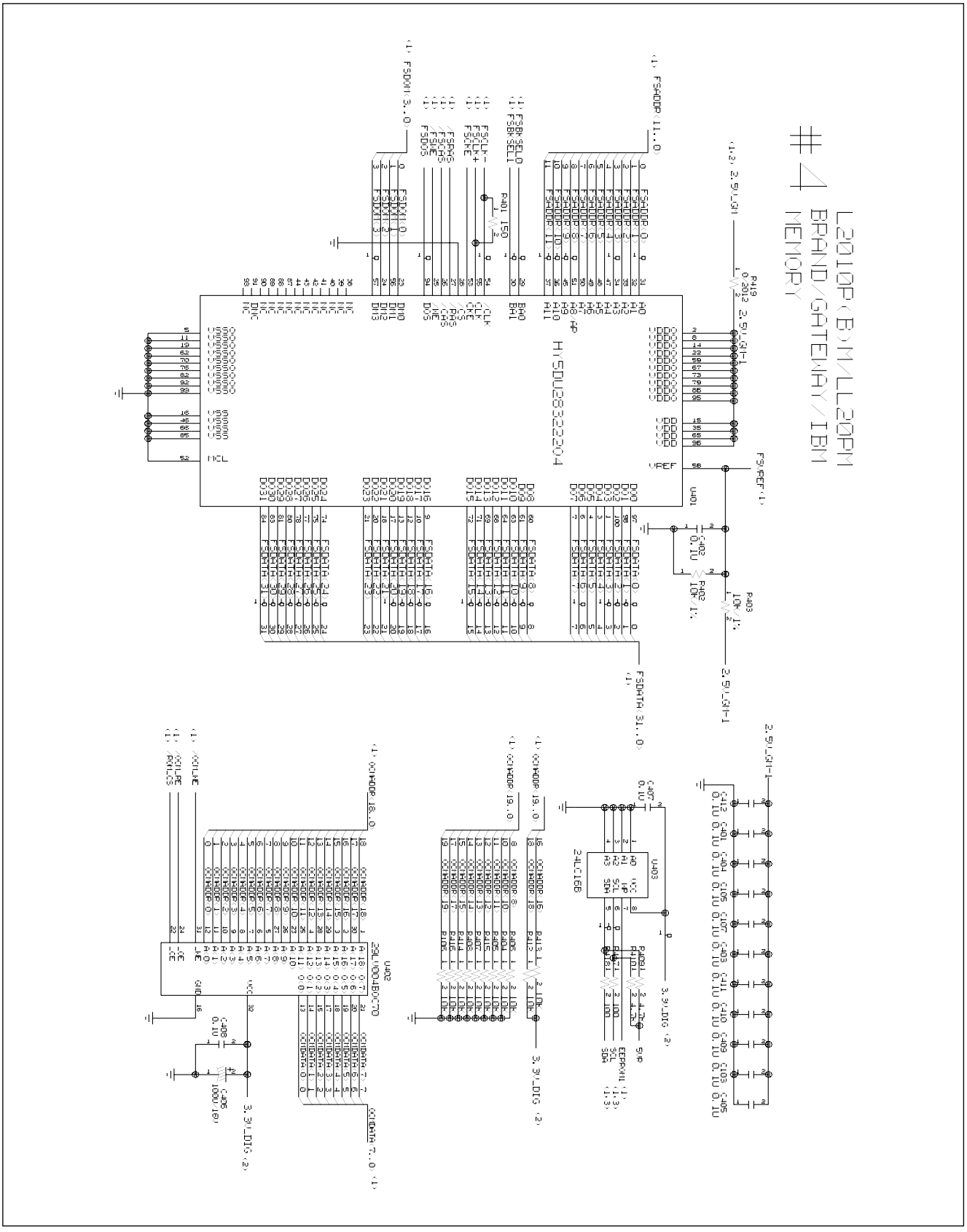
2. MICOM



3. POWER



4. CONNECTOR/JACKS



Blank Page1

Blank Page2

May. 2004
P/NO : 3828TSL064F
Printed in Korea